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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,209	06/28/2004	Takayuki Suzuki	500.43947X00	2529

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7590

02/26/2008

EXAMINER

RADEMAKER, CLAIRE L

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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02/26/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/500,209	Applicant(s) SUZUKI ET AL.	
	Examiner CLAIRE L. RADEMAKER	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/28/2004; 10/27/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8 is/are rejected.
- 7) ☒ Claim(s) 3, 7 and 9-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/28/2004; 10/27/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 6/28/2004 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language (Specifically JP 2000-182630 and JP 2001-189159).

Furthermore, the information disclosure statement filed 10/27/2004 does not list any new references which were not listed on the previous IDS filed 6/28/2004. The references listed on the IDS filed 10/27/2004 have been crossed out, but these references have been considered and initialed on the previously filed IDS.

Double Patenting

2. Claims 8, 10-12, & 15 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 17, 23, 33, & 49-50 of U.S. Patent No. 6,794,078. Although the conflicting claims are not identical, they are not patentably distinct from each other because both disclose a fuel cell separator in a PEM fuel cell, where the separator comprises expanded graphite and a thermosetting resin, where the expanded graphite is a pulverized powder of an expanded graphite sheet.

The process limitation of soaking the separator in water for a specified amount of time at a specified temperature (claim 8 of the instant application), thereby resulting in release of specified concentrations of specified compounds into the water, is performed

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on the claimed product of the instant application. Because the instant application claims a product, and not a process, and because of the specified composition and method of making the separator of U.S. Patent no. 6,794,078, these process limitations are not given patentable weight. Furthermore, while U.S. Patent No. 6,794,078 fails to specifically state how the separator would behave when soaked in water for the specified amount of time at the specified temperature, one of ordinary skill in the art would understand that the separator of U.S. Patent No. 6,794,078 would behave the same as the separator of the instant application, due to the specified composition and method of making the separator.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The disclosure is objected to because of the following informalities:

- i. The statement "the mixing ratio of expanded graphite/resin falls preferably within the range from 95/5 to 40/60 (by weight), more preferably

within the range of from 95/5 to 30/70 (by weight)" (page 29, lines 21-25) is inconsistent with the statement "when the mixing ratio of the expanded graphite to the resin is less than 40/60 the electric properties tend to be degraded" (page 30, lines 1-5) because the expanded graphite/resin ratio 30/70 is lower than 40/60.

ii. The statement "the range of from 95/5 to 30/70" (page 29, lines 23-24) contains a typographical error and should read "the range from 95/5 to 30/70" in order to remain consistent with the rest of the Specification.

Appropriate correction is required.

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

6. Claims 7 & 9-15 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Furthermore, claim 3 is objected to because of the following informality: Claim 3 has been written in improper multiple dependent form. See MPEP 608.01(n).

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-6 & 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamada et al. (US 2002/0107318).

With regard to claims 1-6 & 8, Yamada et al. discloses a fuel cell (paragraphs [0001]-[0004] & [0015]) comprising a separator (paragraph [0015]) comprising 40-90 wt% expanded graphite (paragraphs [0012] & [0044]) and 10-70 wt% thermosetting resin (paragraphs [0012], [0031], & [0044]), where the separator was compression molded between 150-400°C (paragraphs [0045]-[0046]).

While Yamada et al. fails to state the specified properties (bending strain at break, compressive modulus, and Shore hardness) of the separator, one of ordinary skill in the art would understand that these properties are inherent to the composition and method of making the separator. Therefore, because the separator of Yamada et al. is materially the same as the separator of the instant application, and was made by the same process as that of the instant application, one of ordinary skill in the art would

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understand that the separator of Yamada et al. would have the same properties, such as the specified bending strain at break, compressive modulus, and Shore hardness.

Furthermore, while Yamada et al. fails to specifically state that the separator will behave the same as the separator of the instant application when soaked in water for the disclosed amount of time at the disclosed temperature, one of ordinary skill in the art would understand that the separator of Yamada et al. would behave the same as the separator of the instant application, due to the specified composition and method of making the separator.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLAIRE L. RADEMAKER whose telephone number is (571)272-9809. The examiner can normally be reached on Monday - Friday, 8:00AM - 4:30PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CLR

/Claire L. Rademaker/
Examiner, Art Unit 1795

/Alexa D. Neckel/
Supervisory Patent Examiner, Art Unit 1795